09/159,509.

* please order the original patent file & Litigation search (this can be done via EIC)

* Letter for Offeny to surrender the original patent.

* Letter of consent for filing the Reissue from assignee.

* Can't find declaration from - Dan Browning.

* please use and keep the checklist provided.

NOTE: original patent 5,559,495 has been reclassified, now

707/1 OR
345/419 } XR
345/433

WEST

End of Result Set

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L1: Entry 1 of 1 File: USPT Sep 24, 1996

US-PAT-NO: 5559995
DOCUMENT-IDENTIFIER: US 5559995 A

TITLE: Method and apparatus for creating a wireframe and polygon virtual world

DATE-ISSUED: September 24, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
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US-CL-CURRENT: 707/1; 345/419, 345/433

CLAIMS:

What is claimed is:
1. An apparatus for creating a virtual world data base, comprising:
receiving means for receiving first, second and third polygon representations of respective first, second and third virtual objects in a virtual world;
selecting means, coupled to said receiving means, for selecting a first edge of said first virtual object and for selecting a second edge of said second virtual object; and
grouping means, coupled to the receiving means and the selecting means, for grouping said first and second virtual objects in the virtual world into a grouped object comprising said first and second virtual objects joined at an intersection of the first and second edges, the grouped object represented by at least one of a three-dimensional and rotatable wireframe object and a three-dimensional and rotatable sweep polygon.
2. The apparatus according to claim 1 further comprising attribute assigning means, coupled to the grouping means, for assigning an attribute to the first and second edges of the first and second virtual objects, the attribute means including hierarchy means for assigning a grouping hierarchy for the first and second virtual objects wherein the second virtual object is assigned as a child object of the first virtual object and wherein an orientation and a position of the child object is calculated relative to the first virtual object.
3. The apparatus according to claim 2 wherein the attribute assigning means further comprises:
origin assigning means for assigning an origin on the first virtual object around which the third virtual object can rotate; and
constraint assigning means for assigning a three-dimensional constraint of motion to the the third virtual object to constrain how the third virtual object can rotate with respect to the first virtual object.
4. The apparatus of claim 3, wherein the constraint assigning means comprises means for specifying a minimum angle and a maximum angle that said third virtual object can rotate with respect to said origin.
5. The apparatus according to claim 3 wherein the attribute assigning means further comprises color assigning means for assigning color values to the grouped object.
6. The apparatus according to claim 5 wherein the attribute assigning means further comprises texture assigning means for assigning texture values to the grouped object.
7. The apparatus according to claim 2 further comprising data coupling means,

coupled to the grouping means, for coupling real world data to the grouped object.

8. An apparatus for creating a virtual world comprising:
receiving means for receiving first, second and third polygon representations of respective first, second and third virtual objects in a virtual world;
selecting means, coupled to said receiving means, for selecting a first edge of a first virtual object and for selecting a second edge of a second virtual object; and
grouping means, coupled to the receiving means and the selecting means, for grouping said first and second virtual objects in the virtual world into a grouped object comprising said first and second virtual objects joined at an intersection of the first and second edges, the grouped object represented by at least one of a three-dimensional and rotatable wireframe object and a three-dimensional and rotatable sweep polygon;
attribute assigning means, coupled to the grouping means, for assigning an attribute to the first and second edges of the first and second virtual objects, the attribute assigning means including:
hierarchy means for assigning a grouping hierarchy for the first and second virtual objects wherein the second virtual object is assigned as a child object of the first virtual object and an orientation and a position of the child object is calculated relative to the first virtual object; and
origin assigning means for assigning an origin on the first virtual object around which the third virtual object can rotate; and
constraint assigning means for assigning a three-dimensional constraint of motion to the the third virtual object to constrain how the third virtual object can rotate with respect to the first virtual object; and
rendering means for rendering the virtual world including the grouped object.
9. The apparatus of claim 8, wherein the constraint assigning means comprises means for specifying a minimum angle and a maximum angle that said third virtual object can rotate with respect to said origin.